IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A device configured to be coupled to a heart, the heart having a first chamber and a second chamber, the device comprising:

an exciter to generate a current field in the heart;

a first pair of electrodes coupled to the first chamber of the heart;

a second pair of electrodes coupled to the second chamber of the heart; and

a processor coupled to the first pair of electrodes and the second pair of electrodes and adapted to generate first impedance information as a function of a first voltage received by the first pair of electrodes in response to the current field, ~~and to~~ generate second impedance information as a function of a second voltage received by the second pair of electrodes in response to the current field, ~~and adapted to~~ determine a first ventilation rate using the first impedance information, determine a second ventilation rate using the second impedance information, identify a relationship between the first ~~impedance information~~ ventilation rate and the second ~~impedance information~~ ventilation rate, and ~~adapted to~~ generate a code as a function of the relationship between the first ~~impedance information~~ ventilation rate and the second ~~impedance information~~ ventilation rate.

2. (Currently Amended) The device of claim 1 wherein the processor generates an error code if the first ~~impedance information~~ ventilation rate differs from the second ~~impedance information~~ ventilation rate.

3. (Original) The device of claim 1 wherein the processor alternately monitors the first pair of electrodes and the second pair of electrodes.

4. (Original) The device of claim 1 further including a therapy circuit coupled to the processor wherein the therapy circuit delivers therapy as a function of the code.

5. (Original) The device of claim 4 wherein the therapy circuit includes a pulse generator.

6. (Original) The device of claim 1 wherein the processor includes a filter to pass frequencies in a ventilation band.

7. (Original) The device of claim 1 further including an accelerometer coupled to the processor and adapted to provide an acceleration signal and wherein the code is generated as a function of the acceleration signal.

8. (Currently Amended) The device of claim 7 wherein the code is calculated based on a comparison of the first ~~impedance information~~ ventilation rate and second ~~impedance information~~ ventilation rate with the acceleration signal.

9. (Original) The device of claim 1 wherein the processor generates a ventilation signal based on the code and impedance information selected from one of the first impedance information and the second impedance information.

10. (Currently Amended) The device of claim 1 wherein the code is calculated based on a comparison of the first ~~impedance information~~ ventilation rate with the second ~~impedance information~~ ventilation rate.

11. (Previously Presented) An implantable system configured to be coupled to a heart in a thorax, the system comprising:

a plurality of sensors, each sensor adapted to sense a thoracic parameter and provide a signal, the plurality of sensors including a first ventilation sensor adapted to sense a first impedance associated with a first chamber of the heart in the thorax and a second ventilation sensor adapted to sense a second impedance associated with a second chamber of the heart;

a therapy circuit adapted to deliver therapy to the heart; and

a processor coupled to each sensor and coupled to the therapy circuit and wherein the processor is adapted to evaluate the signal received from each sensor and calculate a confidence level as a function of the signal received from each sensor.

12. (Original) The system of claim 11 wherein the plurality of sensors includes an acceleration sensor.

13. (Original) The system of claim 11 further including an excitation circuit coupled to the heart and adapted to provide a transthoracic current field.

14. (Currently Amended) An implantable system configured to be coupled to a heart, the heart having a first chamber and a second chamber, the system comprising:

a first sensor to provide a first signal representative of a first ventilation rate derived from the first chamber of the heart;

a second sensor to provide a second signal representative of a second ventilation rate derived from the second chamber of the heart; and

a processor coupled to the first sensor and coupled to the second sensor and adapted to determine a first ventilation rate using the first signal, determine a second ventilation rate using the second signal, and identify a relationship between the first ~~signal~~ ventilation rate and the second ~~signal~~ ventilation rate and generate a code as a function of the relationship.

15. (Original) The system of claim 14 wherein at least one sensor of the first sensor and the second sensor includes a transthoracic impedance sensor.

16. (Original) The system of claim 14 wherein at least one sensor of the first sensor and the second sensor includes a pair of excitation electrodes and a pair of sensor electrodes.

17. (Original) The system of claim 14 further including an activity sensor coupled to the processor to provide an activity signal based on a detected physical activity.

18. (Original) The system of claim 17 wherein the activity sensor includes an accelerometer.

19. (Original) The system of claim 14 further including a therapy circuit coupled to the processor and wherein the therapy circuit delivers therapy as a function of the code.

20. (Original) The system of claim 19 wherein the therapy circuit includes a pulse generator.

21. (Previously Presented) An implantable device comprising:

an excitation channel to generate a current field in a heart;

a first impedance sensor to generate a first impedance signal based on a first voltage associated with a first chamber of the heart;

a second impedance sensor to generate a second impedance signal based on a second voltage associated with a second chamber of the heart;

a first accelerometer to generate a first acceleration signal based on a detected acceleration associated with the heart;

a signal processor coupled to the first impedance sensor and adapted to generate a first ventilation signal and coupled to the second impedance sensor and adapted to generate a second ventilation signal; and

a processor adapted to receive the first ventilation signal, the second ventilation signal and the first acceleration signal and adapted to generate a code based on a detected similarity between the first ventilation signal, the second ventilation signal and the first acceleration signal.

22. (Original) The implantable device of claim 21 wherein the first accelerometer has a first axis of sensitivity and further including a second accelerometer having a second axis of sensitivity wherein the first axis intersects the second axis and further wherein the processor is adapted to receive the second acceleration signal.

23. (Original) The implantable device of claim 21 further including a telemetry circuit coupled to the processor and adapted to communicate with a remote programmer.

24. (Original) The implantable device of claim 21 wherein the code is generated as a function of the first ventilation signal and the first acceleration signal at a first time and wherein the code is generated as a function of the second ventilation signal and the first acceleration signal at a second time, wherein the first time is prior to the second time.

25. (Original) A method comprising:

receiving a first signal representative of a first ventilation rate derived from a first chamber of a heart;

receiving a second signal representative of a second ventilation rate derived from a second chamber of the heart;

identifying a first relationship between the first ventilation rate and the second ventilation rate; and

generating a code as a function of the first relationship.

26. (Original) The method of claim 25 wherein at least one of receiving the first signal and receiving the second signal includes receiving an impedance signal.

27. (Original) The method of claim 25 further including receiving an acceleration signal based on a detected acceleration and wherein the code is generated as a function of the detected acceleration.

28. (Original) The method of claim 25 further including delivering therapy selected as a function of the code.

29. (Currently Amended) An implantable system <u>configured to be coupled to a heart, the heart having a first chamber and a second chamber, the system</u> comprising:

a first sensor adapted to provide a first impedance signal for [[a]] <u>the</u> first chamber of [[a]] <u>the</u> heart;

a second sensor adapted to provide a second impedance signal for [[a]] <u>the</u> second chamber of the heart; and

a processor coupled to the first sensor and coupled to the second sensor and adapted to ~~generate~~ determine a first ventilation ~~signal as a function of~~ rate using the first impedance signal and a second ventilation ~~signal as a function of~~ rate using the second impedance signal and further adapted to identify a similarity between the first ventilation ~~signal~~ rate and the second ventilation ~~signal~~ rate and store a code having a value based on the similarity.

30. (Original) The system of claim 29 wherein the first sensor includes a pair of excitation electrodes coupled to the first chamber.

31. (Original) The system of claim 29 wherein the first sensor includes a pair of sensor electrodes coupled to the first chamber.

32. (Original) The system of claim 29 further including a filter to pass the first impedance signal and the second impedance signal.

33. (Original) The system of claim 29 further including a therapy circuit coupled to the processor wherein the therapy circuit is adapted to deliver therapy as a function of the code.

34. (Original) The system of claim 33 wherein the processor is adapted to provide a first therapy signal to the therapy circuit when the similarity exists and adapted to provide a second therapy signal to the therapy circuit when the similarity does not exist and further wherein the therapy circuit delivers a first therapy regimen when the first therapy signal is received and a second therapy regimen when the second therapy signal is received.

35. (Original) The system of claim 29 further including an accelerometer coupled to the processor and adapted to provide an acceleration signal and wherein the processor is adapted to select the value based on the acceleration signal when the similarity does not exist.

36. (Currently Amended) The system of claim 29 further including a first accelerometer coupled to the processor and wherein the first accelerometer is adapted to provide a first

acceleration signal and wherein the processor is adapted to select the value based on a comparison of the first acceleration signal and the first ventilation ~~signal~~ rate.

37. (Currently Amended) The system of claim 36 wherein the first accelerometer has a first axis of sensitivity and further including a second accelerometer coupled to the processor, the second accelerometer having a second axis of sensitivity and wherein the first axis intersects the second axis and the processor is adapted to select the value based on a comparison of the second accelerometer signal and the first ventilation ~~signal~~ rate.

38. (Original) A method comprising:

receiving a first signal from a first sensor and a second signal from a second sensor, the signals based on activity of a heart;

comparing the first signal and the second signal;

if a similarity is detected in the comparing, then delivering a first therapy regimen to the heart; and

if the similarity is not detected in the comparing, receiving a third signal based on activity of the heart and delivering a second therapy regimen to the heart, the third signal received from a third sensor and the second therapy regimen selected as a function of the third signal.

39. (Original) The method of claim 38 wherein the second therapy regimen is selected as a function of a signal selected from the first signal and the second signal.

40. (Original) The method of claim 38 wherein receiving the first signal and the second signal includes receiving a first ventilation signal associated with a first chamber of the heart and a second ventilation signal associated with a second chamber of the heart.

41. (Original) The method of claim 40 wherein receiving the third signal includes receiving an accelerometer signal.

42. (Original) The method of claim 38 wherein receiving the first signal and the second signal includes receiving a first acceleration signal associated with a first accelerometer having a first axis of sensitivity and a second accelerometer signal associated with a second accelerometer having a second axis of sensitivity that intersects the first axis, the first accelerometer and second accelerometer responsive to accelerations associated with the heart.

43. (Original) The method of claim 42 wherein receiving the third signal includes receiving a ventilation signal from a chamber of the heart.

44. (Original) The method of claim 38 wherein comparing the first signal and the second signal includes comparing a rate.

45. (Original) The method of claim 38 wherein comparing the first signal and the second signal includes calculating a correlation coefficient.

46. (Currently Amended) A method comprising:

receiving a plurality of input signals corresponding to two or more chambers of a heart, the plurality of input signals including a first ventilation ~~signal based on~~ rate derived from a first impedance associated with a first chamber of the heart and a second ventilation ~~signal based on~~ rate derived from a second impedance associated with a second chamber of the heart;

using a processor to detect a similarity between signals of the plurality of input signals including at least the first ventilation rate and the second ventilation rate; and

delivering therapy to the heart based on the detected similarity.

47. (Original) The method of claim 46 wherein receiving a plurality of input signals includes receiving a first accelerometer signal from a first accelerometer, the first accelerometer disposed proximate the heart.

48. (Original) The method of claim 47 wherein receiving a plurality of input signals includes receiving a second accelerometer signal from a second accelerometer, the second accelerometer

disposed proximate the heart, the first accelerometer having a first axis of sensitivity and the second accelerometer having a second axis of sensitivity and wherein the first axis intersects the second axis.

49. (Currently Amended) The method of claim 47 wherein delivering therapy includes delivering a first therapy regimen if the similarity exists in the first ventilation ~~signal~~ rate and the second ventilation ~~signal~~ rate and delivering a second therapy regimen if the similarity does not exist in the first ventilation ~~signal~~ rate and the second ventilation ~~signal~~ rate.

50. (Original) The method of claim 49 wherein receiving the plurality of input signals includes receiving an acceleration signal and wherein delivering a second therapy regimen includes selecting a therapy regimen based on the acceleration signal.

51. (Original) The method of claim 46 wherein receiving a plurality of input signals includes generating an excitation current field using a first electrode pair and sensing a voltage using a second electrode pair.

52. (Original) The method of claim 46 wherein determining therapy includes selecting the therapy and wherein using the processor to compare each input signal includes identifying an inappropriate input signal in the plurality of input signals and wherein delivering therapy includes de-emphasizing the inappropriate input signal in selecting the therapy.

53. (Previously Presented) A system configured to be coupled to a thorax including a heart, the system comprising:

means for generating a current field in the thorax;

means for generating a first ventilation signal based on a first transthoracic impedance measured by a first pair of electrodes responsive to a first chamber of the heart in the thorax;

means for generating a second ventilation signal based on a second transthoracic impedance measured by a second pair of electrodes responsive to a second chamber of the heart;

first accelerometer means adapted to be coupled to the heart and adapted to provide a first acceleration signal as a function of a sensed acceleration associated with the heart along a first axis;

processor means coupled to the means for generating the first ventilation signal and coupled to the means for generating the second ventilation signal and coupled to the first accelerometer means and adapted to generate a code as a function of a detected similarity between the first ventilation signal, the second ventilation signal and the first acceleration signal; and

therapy means coupled to the processor means and adapted to deliver therapy to the heart as a function of the detected similarity.

54. (Original) The system of claim 53 further including a second accelerometer means coupled to the heart and adapted to provide a second acceleration signal as a function of a sensed acceleration associated with the heart along a second axis, wherein the first axis intersects the second axis.

55. (Original) The system of claim 53 further including telemetry means coupled to the processor means and adapted to communicate with a remote programmer.